<!--StartFragment-->RESULT 1
AAY95782
ID AAY95782 standard; protein; 626 AA.
XX
AC AAY95782;
XX
DT 15-JUN-2007 (revised)
DT 07-NOV-2000 (first entry)
XX
DE Erysipelothrix rhusiopathiae erysipelas protective antigen.
XX
KW Erysipelas protective antigen; Epa; SpaA.1; vacine; infection;
KW immuno-protective epitope; BOND_PC; surface protective antigen SpaA;
KW surface protective antigen SpaA [Erysipelothrix rhusiopathiae];
KW protective antigen SpaA.1;
KW protective antigen SpaA.1 [Erysipelothrix rhusiopathiae]; spaA;
KW spaA [Erysipelothrix rhusiopathiae]; GO5215; GO6810.
XX
OS Erysipelothrix rhusiopathiae.
XX
FH Key   Location/Qualifiers
FT Peptide   1. .29
FT   /label= Signal_peptide
FT Protein   30. .626
FT   /label= Mature_protein
FT Region   50. .55
FT   /note= "LPXTGX motif"
FT Peptide   448. .467
FT   /label= Repeat_R1
FT Peptide   468. .487
FT   /label= Repeat_R2
FT Peptide   488. .507
FT   /label= Repeat_R3
FT Peptide   508. .527
FT   /label= Repeat_R4
FT Peptide   528. .547
FT   /label= Repeat_R5
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FT   /label= Repeat_R6
FT Peptide   568. .587
FT   /label= Repeat_R7
FT Peptide   588. .607
FT   /label= Repeat_R8
FT Peptide   608. .626
FT   /label= Repeat_R9
XX
PN WO200047744-A1.
XX
PD 17-AUG-2000.
XX
PF 10-FEB-2000; 2000WO-US003789.
XX
PR 10-FEB-1999; 99US-0119389P.
XX
PA (UYRQ) UNIV ROCKEFELLER.
XX
PI Fischetti VA, Shimoji Y;
XX
DR WPI; 2000-524541/47.
DR N-PSDB; AAA50205.
DR PC:NCBI; gi4586910.
XX
PT Vaccines for protecting turkeys and pigs against Erysipelothrix
PT rhusiopathiae infections comprising a polypeptide sequence from the N-
PT terminal region of an erysipelas protective antigen.
XX
PS Claim 2; Fig 2; 61pp; English.

APPENDIX A

XX
CC The present sequence is that of the erysipelas protective antigen (Epa or
CC SpaA.1) of Erysipelothrix rhusiopathiae strain Fujisawa, as deduced from
CC an isolate Epa gene (see AAA50205). E. rhusiopathiae is the causative
CC agent of erysipelas in animals and erysipeloid in humans. Epa shows
CC structural and sequence similarities to pneumococcal surface protein A
CC (PspA) and other choline binding proteins of Streptococcus pneumoniae.
CC Its C-terminal region consists of a series of conserved 20-amino acid
CC repeats (R1-R9). The N-terminal portion of the Epa protein, especially a
CC polypeptide comprising residues 12-195 of the present sequence, was
CC identified as a vaccine antigen, protecting mice and pigs from a lethal
CC challenge with E. rhusiopathiae. Vaccines containing immunogenic
CC polypeptides of E. rhusiopathiae, where the immunogenic polypeptide
CC comprises an immuno-protective epitope from the N-terminal region of Epa,
CC especially residues 30-447, 30-195 or 30-100 of the present sequence, are
CC claimed. A claimed method for protecting an animal, especially a turkey
CC or pig, from infection by E. rhusiopathiae involves administering the
CC vaccine, or an expression vector comprising a nucleic acid encoding the N
CC -terminal portion or ful-length Epa. A claimed method for detecting the
CC presence of protective antibodies to E. rhusiopathiae involves detecting
CC binding of antibodies in a biological sample with a polypeptide
CC comprising an immunoprotective epitope of Epa
CC
CC Revised record issued on 15-JUN-2007 : Enhanced with precomputed
CC information from BOND.
XX
SQ Sequence 626 AA;

Query Match 100.0%; Score 3265; DB 1; Length 626;
Best Local Similarity 100.0%; Pred. No. 2.4e-215;
Matches 626; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MKKKKHLFPKVSLMSCLLLTAMPLQTAFADSTDISVIPLIGEQVGLLPVLPGTGVHAQEY 60
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Db          1 MKKKKHLFPKVSLMSCLLLTAMPLQTAFADSTDISVIPLIGEQVGLLPVLPGTGVHAQEY 60

Qy         61 NKMTDAYIEKLVSLINQKVKPFLINEPKGYQSFEAVNEEINSIVSELKNEGMSLQNIHHM 120
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Qy        181 KGRAPLEAFIVPLRDRIRSMNEIAAEVNYLPEAHEDFLVSDSSEYNDKLNNINFALGLGV 240
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Qy        241 SEFIDYNRLENMMEKELHPLYLELYAMRRNRQIQVVRDVYPNLERANAVVESLKTIKDIK 300
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Db        241 SEFIDYNRLENMMEKELHPLYLELYAMRRNRQIQVVRDVYPNLERANAVVESLKTIKDIK 300

Qy        301 QRGKKLQELLEIYIQRSGDVRKPDVLQRFIGKYQSVVDEEKNKLQDYLESDIFDSYSVDG 360
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Qy        361 EKIRNKEITLINRDAYLSMIYRAQSISEIKTIRADLESLVKSFQNEESDSKVEPESPVKV 420
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Qy        481 NTGAIVTGWKKVANKWYYLEKSGAMATGWKKVSNKWYYLENSGAMATGWKKVSNKWYYLE 540
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Qy        601 KSGMMVTGSKSIDGKKYAFKNDGSLK 626
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